

NASA Technology Transfer

NASA Kennedy Space Center
Technical POC: **Luke Roberson**
Tech Transfer POC: **Jim Nichols**
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HySense Technology LLC, Rockledge, FL
POC: Dr. Nahid Mohajeri
nahid@hysensetechnology.com
<http://www.hysensetechnology.com/>

National Aeronautics
and Space Administration



Color Changing Material for Hydrogen Leak Detection

NASA Value

Kennedy Space Center scientists developed a hydrogen leak sensor utilizing a combination of chemochromic pigment and polymer that can be molded or fiber spun into rigid or flexible shapes such as tape. The sensor turns a dark color when exposed to hydrogen gas. This sensor has proven to be very effective for pinpointing the exact location of leaks in hydrogen gas lines and fittings at launch pads.

Partnership Mechanism

Kennedy Space Center exclusively licensed this technology to the University of Central Florida (UCF), who also holds patents that are complimentary to KSC's. UCF has bundled the patents and exclusively licensed the portfolio to HySense Technology LLC, a startup company founded by a UCF professor who supports the UCF Florida Solar Energy Center (FSEC).



Status

HySense has fully developed its product (known as Intellipigment™), and currently has five commercial customers. The company recently won the \$100,000 first-place award at the CAT5 innovation competition at the Innovation Concourse of the Southeast: Safety & Manufacturing event in Orlando, FL.

Expected Results/Benefits

Commercial production and sales of this technology by HySense Technology will make this leak sensor widely available for use by NASA, DoD, and industries that utilize hydrogen gas.

